

DATA BRIEF

FY 2002 Budget Requested Large Increases in R&D Funding for Defense and Health

by Ronald L. Meeks

More than half of the requested FY 2002 Federal R&D funding is directed to defense activities.

Based on revised R&D budget authority¹ data for fiscal years (FYs) 2001 and 2002, first available during the Summer 2002, President Bush's budget request proposed a FY 2002 budget authority of \$99.1 billion for research and development (R&D) and R&D plant programs. This amount represents an increase of 8.5 percent over the preliminary FY 2001 R&D and R&D plant total of \$91.3 bil-

lion (table 1). After adjusting for expected inflation, the FY 2002 R&D and R&D plant budget authority represents an increase of 6.3 percent over the FY 2001 figure. These large R&D increases, however, are slated for defense and health activities only. R&D for all other functional categories, as a group, combined would decline by 2.6 percent (down 4.6 percent in constant dollars).

Table 1. Federal R&D and R&D plant budget authority, by budget function: FYs 2000-2002

Budget function	FY 2000 actual	FY 2001 preliminary	FY 2002 proposed	Percent change FYs 2001-2002
	Billions of current dollars for R&D and R&D plant			
Total.....	83.581	91.335	99.093	8.5
National defense.....	43.161	46.243	51.996	12.4
Health.....	18.121	20.814	23.459	12.7
Space research and technology.....	8.437	8.986	9.076	1.0
General science.....	5.593	6.234	6.156	-1.2
Natural resources and environment.....	2.082	2.272	2.230	-1.9
Other functions ¹	6.187	6.786	6.176	-9.0
	Billions of current dollars for R&D			
Total.....	78.664	86.270	94.000	9.0
National defense.....	42.580	45.595	51.362	12.6
Health.....	17.869	20.569	23.037	12.0
Space research and technology.....	5.363	6.016	6.143	2.1
General science.....	4.977	5.393	5.339	-1.0
Natural resources and environment.....	1.999	2.174	2.143	-1.4
Other functions ¹	5.876	6.523	5.976	-8.4

¹Other functions include transportation; agriculture; energy; veterans benefits and services; education, training, employment, and social services; commerce and housing credit; international affairs; administration of justice; community and regional development; income security; and general government.

NOTE: Data reflect budget information collected through May 2001 and Public Law 107-20 (July 2001) that includes rescissions and supplementals to R&D.

SOURCES: Agencies' submissions to Office of Management and Budget, Circular No. A-11, Max Schedule C; agencies' budget documents; and supplemental data obtained from agencies' budget offices.

Electronic Dissemination

SRS data are available through the World Wide Web (<http://www.nsf.gov/sbe/srs/>). For more information about obtaining reports, contact paperpubs@nsf.gov or call 301-947-2722. For NSF's Telephonic Device for the Deaf, dial 703-292-5090.

¹Budget authority is what the law authorizes, or allows, the Federal Government to spend for programs, projects, or activities. The totals reported in this Data Brief include major revisions to the Department of Defense R&D figures that were included in the President's initial budget request. See Data Collection Notes section.

FY 2002 Budget Requested Large Increases in R&D Funding...—page 2

This Data Brief contains information on the overall distribution and patterns of Federal funding of the R&D components of the budget functions, as proposed by the Administration for FY 2002. The discussion focuses on the five largest mission area classifications with respect to R&D funding: national defense, health, space research and technology, general science, and natural resources and environment. These R&D activities cut across agency lines and account for nearly 94 percent of the total Federal R&D budget authority.

Details on Federal funding of the R&D components of agency programs for FYs 2000 through 2002 will be available in the forthcoming National Science Foundation (NSF) report, *Federal R&D Funding by Budget Function: Fiscal Years 2000-2002*. For the first time, this report will contain selected total R&D and R&D plant data. (Past reports did not include R&D plant data.) More detailed data are available from NSF, Division of Science Resources Statistics, R&D Statistics Program.

Proposed Defense R&D

From FYs 1990 until 2001, the defense share of the Federal R&D budget authority decreased, dropping from 62.6 to 52.9 percent. However, the Bush Administration has proposed a 12.6-percent increase in national defense R&D budget authority (in current dollars) for FY 2002. With this gain, defense would account for 54.6 percent (\$51.4 billion) of the Federal R&D total. The Department of Defense's (DoD's) military research, development, test, and evaluation (RDT&E) programs account for most—92.3 percent, or \$47.4 billion—of the FY 2002 national defense R&D budget authority. R&D funding for the Department of Energy's (DOE's) atomic energy defense activities accounts for another 6.0 percent (\$3.1 billion) of the proposed FY 2002 national defense R&D budget. The remaining money for this budget function in-

cludes DoD military funding for personnel costs in direct support of R&D conduct, medical research funded outside of the RDT&E accounts, and other appropriations funding certain DoD programs.

Proposed Nondefense R&D

The nondefense share of Federal R&D budget authority had increased during the 1990's, rising from 37.4 percent in FY 1990 to 46.8 percent in FY 1999. After a slight dip in share between FYs 1999 and 2000 (to 45.9 percent), nondefense R&D budget authority increased between FYs 2000 and 2001 to 47.1 percent. The President's FY 2002 budget contains a \$2.0-billion increase in total nondefense R&D budget authority. The resulting \$42.6 billion total represents a 4.8-percent increase over preliminary FY 2001 funding. However, practically all of the increase in nondefense R&D is for health-related activities.

Among individual nondefense budget functions, health accounts for the largest FY 2002 R&D budget increase: it is \$2.5 billion above the FY 2001 level and would constitute 24.5 percent (\$23.0 billion) of the total Federal R&D budget authority. The bulk of the health account (\$22.0 billion) is targeted to National Institutes of Health (NIH) programs. All 19 NIH institutes (including the new National Institute of Biomedical Imaging and Bioengineering) would receive increased R&D budgets. Total R&D funding for health activities at NIH is expected to increase by \$2.5 billion, or 12.9 percent, in FY 2002. The National Cancer Institute is proposed to receive the largest portion (\$4.1 billion) of NIH R&D dollars; followed by the National Heart, Lung, and Blood Institute at \$2.5 billion and the National Institute of Allergy and Infectious Diseases at \$2.3 billion. Five other institutes—the National Institute of General Medical Sciences, the National Institute of Diabetes and Digestive

Health-related R&D would rise 12 percent in FY 2002. R&D funding for general science, natural resources and environment, and other nondefense functions would decline.

FY 2002 Budget Requested Large Increases in R&D Funding...—page 3

and Kidney Diseases, the National Institute of Neurological Disorders and Stroke, the National Institute of Mental Health, and the National Institute of Child Health and Human Development—are each expected to receive more than \$1 billion.

The Administration proposed a 2.1-percent increase in R&D (not including R&D plant) budget authority for space research and technology activities, up \$127 million from the FY 2001 level to \$6.1 billion. The entire space research and technology account is covered by National Aeronautics and Space Administration (NASA) programs. Beginning in FY 2000, NASA reclassified its space station program as a physical asset and space station research as equipment and transferred funding for the space station program from R&D to R&D plant (\$2.3 billion in FY 2000, \$2.1 billion in FY 2001, and nearly \$2.1 billion in FY 2002). Therefore, any discussion about the proposed R&D portion of NASA's funding must include both R&D and R&D plant to see the impact of funding to the space station program. The largest shares of NASA's R&D and R&D plant activities include space science (30.7 percent), the space station program (23.0 percent), earth science (16.7 percent), and advanced space transportation (14.8 percent). In all, space research and technology accounts for 6.5 percent (9.2 percent when including R&D plant) of the proposed total Federal R&D budget authority.

The Administration has proposed that R&D funding for general science be decreased by 1.0 percent—or by \$54 million—in FY 2002, to a total of \$5.3 billion. NSF accounts for 56.5 percent of these dollars; DOE provides the rest of these general science funds. NSF, funded at the same current dollar level as in FY 2001, supports mathematical and physical sciences; geosciences; biological sciences; engineering; computer and information sciences; and social, behavioral, and economic sciences. DOE's major funded

activities (each accounting for more than \$300 million) in general science R&D include support for high energy physics, nuclear physics, basic energy sciences, and biological and environmental research. Under the proposed budget, general science would account for 5.7 percent of the total Federal R&D budget authority in FY 2002.

Natural resources and environment R&D is budgeted at \$2.1 billion in FY 2002, down 1.4 percent from the FY 2001 level. Five agencies provide support for R&D activities in this area: the Department of Commerce, which accounts for 35 percent of the funding; the Department of the Interior, 27 percent; the Environmental Protection Agency, 25 percent; the Department of Agriculture, 11 percent; and DoD's Army Corps of Engineers, 1 percent. Natural resources and environment R&D would account for 2.3 percent of the total Federal R&D budget authority under the proposed budget. R&D funding for the combined 11 other functions is proposed to decrease 8 percent in FY 2002.

Data Collection Notes

The data in the forthcoming report, *Federal R&D Funding by Budget Function: Fiscal Years 2000-2002*, represent agencies' best estimates of actual and proposed Federal funding for R&D as reported during the period February through May 2001. These data are based primarily on information agencies provide to the Office of Management and Budget and account for nearly all federally sponsored R&D activities. The report also contains R&D information that became available from the individual agencies after the Administration's budget was prepared and reported. Such information consists of agency budget justification documents submitted to Congress and supplemental, program-specific information obtained from agency budget and program staff through June 2001. Also, in July 2001, Congress approved and the President signed into law a

FY 2002 Budget Requested Large Increases in R&D Funding...—page 4

supplemental appropriation bill (Public Law 107-20) that includes rescissions and supplementals to R&D. These changes affected R&D for national defense and natural resources and environment and are reflected in this Data Brief and in the report. Therefore, budget numbers for individual activities, programs, or agencies may differ from those published in the President's budget or agency budget documents. Pending Congressional action will determine the final budget authority for R&D in FY

2002; how actions by Congress and the Administration affect the outcome of R&D funding levels will become apparent in 2002-2003.

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